UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/594,170	06/15/2000	Helmut Rudigier	622HE/48982	8885

7590 02/27/2003

Evenson McKeown Edwards & Lenahan PLLC
1200 G Street N. W.
Suite 700
Washington, DC 20005

EXAMINER
ROJAS, OMAR R

ART UNIT	PAPER NUMBER
2874	

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Offic Action Summary	Applicati n No. 09/594,170	Applicant(s) RUDIGIER, HELMUT	
	Examiner Omar Rojas	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Peri d f r Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *January 13, 2003* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 12-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9 and 12-30* is/are rejected.

7)☒ Claim(s) *14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *13 January 2003* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on January 13, 2003 have been approved. The examiner reminds the applicant(s) that Figures 2A-2B and Figures 5A-5B must also be corrected. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

Response to Amendment

2. With regards to the amendment filed on January 13, 2003, all the requested changes to the claims and specification have been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 1-9 and 12-30 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

4. Claim 23 is objected to because of the following informalities: In view of the amendment to claims 1-2, claim 23 appears to be unnecessarily redundant and does not further limit the claimed invention. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 14 and 21 are rej ct d und r 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Regarding claims 14 and 21, the phrases "preferably in" and "preferably made of" render the claims indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 1-2, 5, 6, 13, 16, 20, and 23 are rejected under 35 U.S.C. 102(b) as b ing anticipat d by U.S. Pat nt No. 5,420,946 to Tsai ("Tsai").

Regarding claims 1, 6, 13, and 23, Tsai discloses an optical fiber switch (see Figs. 2 & 7) having a glass body (124) with a highly reflective layer for establishing a mirror surface, wherein the mirror surface is arranged on a swiveling switch body (130) having a cuboid shape; wherein the glass body (124) is arranged on the switch body (130) in a surface-flush manner in a recess (18).

Regarding claims 2, 5, 16, and 20, applicant(s) is claiming the product including the process of making the optical switch, and therefore are of "product-by-process" nature. The courts have been holding for quite some time that the determination of the patentability of product-by-process claim is based on the product itself rather than on the process by which the product is made. *In re Thorpe*, 77 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). Patentability of claim to a product does not rest merely on a difference in the method by which that product is made. Rather, it is the product itself which must be new and unobvious. Applicant has chosen to claim the invention in the product form. Thus, a prior art product which possesses the claimed product characteristics can anticipate or render obvious the claimed subject matter regardless of the manner in which it is fabricated. A rejection based on 35 U.S.C. section 102 or alternatively on 35 U.S.C. section 103 of the status is eminently appropriate and acceptable. *In re Brown and Saffer*, 173 USPQ 685 and 688; *In re Pilkington*, 162 USPQ 147.

As such no weight is given to the process steps recited in claim 2, 5, 16, and 20.

10. Claims 1, 2, 5, 12, 15, 16, 20, and 23 are rejected under 35 U.S.C. 102(e) as b ing anticipat d by US 6,498,870 to Wu t al. ("Wu").

Regarding claims 1, 12, 15, and 23, Wu discloses an optical switch comprising a glass body support (12) having a highly reflective mirror surface; wherein the mirror surface is arranged on a swiveling switch body (11); wherein the switch body is made from a material (aluminum) which can be cast; wherein the support (12) projects from the switch body (11) in a substantially lug like manner. See Figure 1a.

Regarding claims 2, 5, 16, and 20, applicant(s) is claiming the product including the process of making the optical switch, and therefore are of "product-by-process" nature. The courts have been holding for quite some time that the determination of the patentability of product-by-process claim is based on the product itself rather than on the process by which the product is made. *In re Thorpe*, 77 F.2d 695, 227 USPQ 964 (Fed. Cir. 1985). Patentability of claim to a product does not rest merely on a difference in the method by which that product is made. Rather, it is the product itself which must be new and unobvious. Applicant has chosen to claim the invention in the product form. Thus a prior art product which possesses the claimed product characteristics can anticipate or render obvious the claimed subject matter regardless of the manner in which it is fabricated. A rejection based on 35 U.S.C. section 102 or alternatively on 35 U.S.C. section 103 of the status is eminently appropriate and acceptable. *In re Brown and Saffer*, 173 USPQ 685 and 688; *In re Pilkington*, 162 USPQ 147.

Claim Rejections - 35 USC § 103

11. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

12. Claims 3, 4, 17-19, and 21 ar rejected under 35 U.S.C. 103(a) as being unpatentable over Wu as applied to claims 1 and 2 above.

Regarding claims 3, 17, and 21, the previous remarks concerning claims 1-2 are incorporated herein. Thus, Wu appears to differ from claims 3, 17, and 21 in that Wu does not expressly disclose that the support (12) has reflective layers on both sides. Such a feature could be inherent in Wu nonetheless. Regardless, providing the support (12) of Wu with dual-sided reflective layers would have been desirable to achieve multi-directional switching of optical signals. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to modify Wu to obtain the invention specified by claims 3, 17, and 21.

Regarding claims 4 and 18-19, the examiner incorporates herein the previous remarks concerning claims 1-3. Therefore, Wu further differs from claims 4 and 18-19 in that Wu is silent as to the thickness of the glass body (12). However, it is well known in the art to use glass plates having reflective coatings on the order of the specified thickness of claims 4 and 18-19. See, for example, U.S. Patent No. 4,511,618 to Duchene et al., col. 3, ll. 55-60. Thus, if the inherent thickness of the glass body 12 of Wu does not fall within the specified ranges of claims 4 and/or 18-19, it would have been obvious to one of ordinary skill at the time of the claimed invention to modify Wu to have the recited thickness.

13. Claims 7-9 and 22 are rejected under 35 U.S.C. 103(a) as being unpat ntabl v r Wu as appli d to claims 1 and 17 abov , and furth r in view of U.S. Pat nt No. 6,310,737 to Gillich et al. (hereinafter "Gillich").

Regarding claims 7-9 and 22, Wu does not expressly disclose using a protective layer as specified by claims 7-9 and 22. However, Gillich in a related disclosure teaches the benefits of using a protective layer made of SiO_2 (i.e., silicon oxide) which is vacuum deposited over a metallic reflective layer. Note col. 1, ll. 54-67 of Gillich. Since the invention of Gillich has applicability to reflector bodies in general (see Gillich, col. 2, ll. 24-30), the ordinary skilled artisan would have found it obvious at the time of the claimed invention to use the teachings of Gillich to modify Wu in order to provide a protective layer for the reflective layer of Wu, thereby obtaining the invention specified by claims 7-9 and 22.

14. Claims 24-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu in view of Gillich as applied to claims 7-9 and 22, and further in view of U.S. Patent No. 6,059,416 to Choi et al. (hereinafter Choi).

Regarding claims 24-30, most of the limitations recited are clearly present or inherent with regards to Wu alone. Certain missing features such as the use of a protective layer would have been obvious in view of Wu alone or in view of additional prior art such as Gillich as previously discussed. Thus, the prior art further differs substantially from claims 24-30 in that neither Wu nor Gillich expressly discloses cutting the glass body out of a glass plate provided with the at least one reflective layer. However, Choi clearly teaches a method which meets this limitation. See col. 5, ll. 14-30 of Choi. The ordinary skilled artisan would have wanted to adapt the techniques of Choi to Wu in order to efficiently produce large quantities of reflectors or improve the surface flatness of the reflectors, e.g. see col. 5, ll. 30-34 of Choi. Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the claimed invention to modify Wu to obtain the invention specified by claims 24-30.

Allowable Subject Matter

15. Claim 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose or suggest, alone or in combinations, inserting the support at an essentially cuboid-shaped switch body approximately at a level of medium deepness. Such a positively recited invention appears to be shown in Fig. 3a, for example.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. The Gillich and Choi references were furnished to the applicant(s) in a previous Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (703) 305-8528 and whose e-mail address is *omar.rojas@uspto.gov*. The examiner can normally be reached on Monday-Friday (7:00AM-3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hemang Sanghavi, can be reached on (703) 305-3484. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722 for regular communications. The examiner's personal work fax number is (703) 746-4751.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Omar Rojas
Patent Examiner
Art Unit 2874

or
February 20, 2003

HEMANG SANGHAVI
PRIMARY EXAMINER